

REMARKS

Claim 1 was rejected under 35 USC 103 as being unpatentable over Budzich in view of Imada. The Examiner states that Budzich teaches all of the claimed subject matter but does not teach that the first and second outlet ports of the first directional control valve are in communication when the first directional control valve is moved from the central position towards the second position (disclosed as regeneration position). The Examiner further states that Imada teaches a fluid system comprising first and second fluid circuits connected to the single source, having respecting first and second direction control valves connected to respective first and second cylinders having head end and rod end ports; wherein each directional control valve includes supply inlet, exhaust and first and second outlet ports connected respectively to the supply source, reservoir, and head end and rod end ports of the respective cylinders; and that each directional control valve is movable from a central position to first and second operating positions. Applicant respectfully disagrees, at least in part, with the Examiner. It appears from the drawing of Imada that the lift cylinder is a single acting cylinder which requires a directional control valve having only one position for directing pressurized fluid to the single end of the single acting cylinder. However, it is recognized that most lift cylinders are double acting cylinders.

The Examiner also states that when the first directional control valve of Imada is in the second operable position, the supply inlet port fully communicates with the head end port, and the rod end port fully communicates with the supply inlet port; that the head end and rod end ports of the first directional control valve are in communication when the first directional control valve is moved from the central position towards the second position. The Imada reference requires an additional ‘speedup valve’ disposed between the directional control valve and the cylinder. The control device (speedup valve) of Imada that connects the respective ends of the cylinder is not the directional control valve. The rod end port of Imada is not in full communication with the supply inlet port of the directional control valve when the directional control valve is in its second operative position. The fluid flow from the rod end port must be directed back across the directional control valve in order to be in full communication with the supply inlet port. In order to more clearly define the subject

invention, claim 1 has been amended to specifically state that the first directional control valve is a three-position valve and that the flow connection between the first and second ends of the second fluid cylinder is directed through the three-position valve. Imada clearly teaches using a separate valving element (speedup valve) to obtain regeneration of the fluid between the respective ends of the tilt cylinder to obtain a greater speed of extension of the cylinder. Imada does not teach the claim limitation of having pressure equalization between the two cylinders when the three-position valve is in its second operative position and the second directional valve is in either of its operative positions. In fact, since the ‘speedup device’ of Imada is located downstream of the directional control valve, pressure equalization would not be achieved most of the time. Especially when the directional control valve upstream of the ‘speedup’ valve is being modulated. This would be true because an inherent pressure drop would occur across the directional control valve.

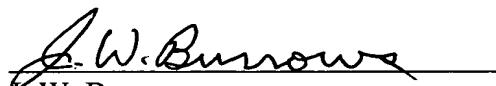
The Examiner states that a comparison of Budzich and Imada teaches that the third position of the first directional control valve can be eliminated, by eliminating an intermediate position where the rod end is connected to the exhaust port. Applicant fails to see any teaching in Imada to eliminate the second position of the directional control valve. In fact, if that would have been the desire of Imada, then the second position of the control valve of Imada would have had to be redesigned to accomplish the function of the ‘speedup valve 10’. Likewise, in Budzich, there is no teaching or suggestion to eliminate the second (referred to as third by the Examiner) operative position. In fact Budzich, clearly teaches that both valves are the same. Further, Budzich teaches the desire to obtain regeneration only when desirable, that is when the control spool is selectively moved to the regeneration position. There is no teaching in Budzich or Imada the objective of obtaining pressure equalization between the first and second cylinders when they are both being operated at the same time. In the claimed arrangement, it is clearly set forth that pressure equalization between the two cylinders is accomplished when the three-position valve is being moved towards its second operative position and the other directional control valve is being towards either of its operative positions. In view of the amendment to claim 1 and the above noted comments, Applicant believes that claim 1 is allowable over the cited references.

Claims 4-8 were rejected under 35 USC 103 as being unpatentable over Budzich in view of Johnson. However, it is respectfully submitted that the respective limitations of dependent claims 4-8, when taken in combination with amended claim 1, are allowable over the references of record.

In view of the above, it is believed that the cited references do not singularly or in combination teach or make obvious the invention claimed herein.

It is respectfully urged that the subject application is in condition for allowance and allowance of the application at issue is respectfully requested.

Respectfully submitted,



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